PCT/EP2003/006482

Alpha-Sulfonylamino-Acetonitriles

This application is a 371 of pate posto6482 filed on 0/8/2003.

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The present invention relates to novel α -sulfonylamino-acetonitrile derivatives of formula I. It further encompasses the preparation of the novel active compounds and to agrochemical compositions comprising at least one of these novel compounds as active ingredient. The invention further relates to the preparation of the said compositions and to the use of the compounds or of the compositions for controlling or preventing the infestation of plants by phytopathogenic microorganisms, especially fungi.

The q-sulfonylamino-acetonitrile derivatives according to the present invention correspond to the general formula I

$$Ar_{1}-X = \begin{bmatrix} R_{1} & O & R_{3} & R_{4} & R_{5} \\ S & N & Ar_{2} & Ar_{2} \end{bmatrix}$$

$$CN = \begin{bmatrix} R_{5} & W & R_{7} \\ R_{8} & C & R_{8} \end{bmatrix}$$

$$(1)$$

including the optical isomers thereof and mixtures of such isomers, wherein Ar1 and Ar2 independently of each other stand for an optionally substituted aryl or heteroaryl group.

R₁ and R₂ stand independently of each other for hydrogen, optionally substituted C₁-C₅alkyl, optionally substituted C₂-C₅alkenyl, C₂-C₅alkynyl or optionally substituted C₃-C₀cycloalkyl;

designates hydrogen, C₃-C₅alkenyl, C₃-C₅alkynyl or optionally substituted C₁-C₅alkyl;

is optionally substituted C1-C5alkyl, optionally substituted C2-C5alkenyl, C2-C5alkynyl or optionally substituted C3-C6cycloalkyl;

R₅ and R₀ are independently of each other hydrogen or optionally substituted C₁-C₅alkyl, optionally substituted C2-C5alkenyl, C2-C5alkynyl or optionally substituted C3-C6cycloalkyl; R_7 and R_8 are independently of each other hydrogen or optionally substituted $C_1\text{-}C_5$ alkyl, optionally substituted C2-C5alkenyl, C2-C5alkynyl or optionally substituted C3-C6cycloalkyl;

designates a bridge selected from -O-, -S(O)m- or -NR3-; W

designates a direct bond or a bridge selected from -O-, -S(O)_m- or -NR₃-; a and b independently of each other stand for a number 1, 2 or 3; and c and m independently of each other stand for a number zero, 1 or 2.

More specifically the present invention refers to the a-sulfonylamino-acetonitrile derivatives